

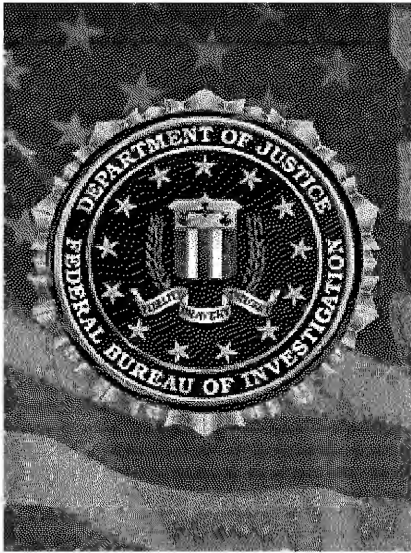
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# U.S. Cyber Threats

## The Cyber Landscape

ASAC



FBI-Minneapolis Division  
Minnesota Cyber Crime Task Force

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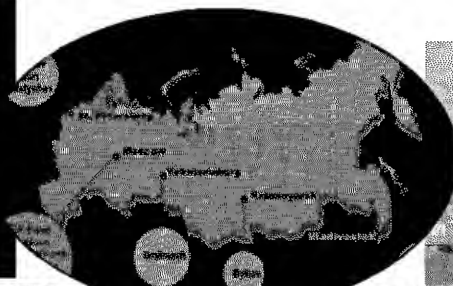
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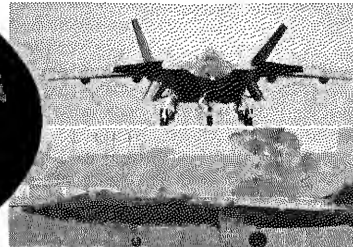
# U.S. Cyber Threats



Hacktivist



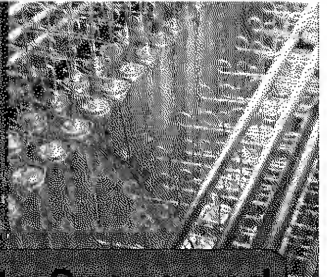
Criminal



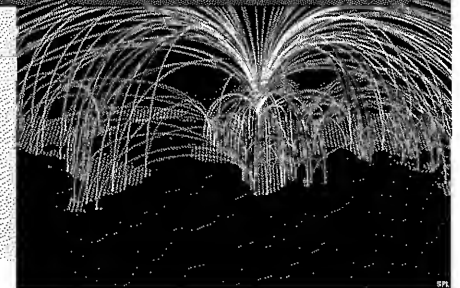
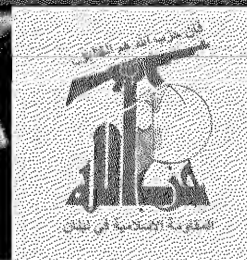
Espionage



Terrorism



State-Sponsored  
Disruptions/War



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# Why the Computer Intrusion Priority?

CHET > News > Insecurity Complex

## Was U.S. water utility hacked last week?



by Elinor Miller November 17, 2011 7:40 PM PST

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News

## Iran admits Stuxnet worm infected PCs at nuclear reactor

But denies that 'groundbreaking' malware infiltrated control systems or caused major damage

By Gregg Keltner

September 27, 2010 12:42 PM EDT

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0

## Exclusive: potential China link to cyberattacks on gas pipeline companies

Those analyzing the cyberspies who are trying to infiltrate natural-gas pipeline companies have found similarities with an attack on a cybersecurity firm a year ago. At least one US government official has blamed China for that earlier attack.

By Mark Clayton, Staff writer / May 10, 2012

## Chinese hackers targeted energy multinationals, claims McAfee

Computer security firm alleges attackers made co-ordinated intrusions into systems of five major oil and gas firms

Tania Brangan in Beijing  
guardian.co.uk, Friday 11 February 2011 06:01 EST  
Article history

## New 'Unknowns' Hacking Group Hits NASA, Air Force, European Space Agency

02 May 2012 03:48 PM ET | by Matt Liebowitz, SecurityNewsDaily Staff Writer

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A new hacking group calling itself 'The Unknowns' has published a list of passwords and documents reportedly belonging to NASA, the European Space Agency and the U.S. Air Force, among other high-profile government targets.

CHET > News > Security

## Report: Hackers penetrated Nasdaq computers



by Steven Musil February 4, 2011 30:48 PM PST

Follow @stewenmusil

SECURITY

Dec 8 23:16 4:38 pm

## 'Anonymous' Takes Down Visa.com in WikiLeaks Protest

By Robert McMillan, B6 News

A loosely organized group of internet hacktivists took down Visa's website Wednesday, after organizing a similar attack on MasterCard.



Digits : Personal Technology : What They Know

TECHNOLOGY | APRIL 8, 2009

## Electricity Grid in U.S. Penetrated By Spies

## Iran a more dangerous cyber threat than China or Russia, experts tell Congress

By William Jackson Apr 26, 2012

Iran has demonstrated a willingness to attack the United States and the intent to develop a cyber war capability, eclipsing Russia and China as a threat to the nation, a panel of policy and technical experts told House lawmakers.

## Nortel Penetrated by Hackers Since at Least 2000

POSTED BY: ROBERT CHARETTE / TUE, FEBRUARY 14, 2012

## Warning: New Hack Threat Leaves Millions at Risk of Cyber Attack



Published: Tuesday, 29 Jan 2013 | 1:11 PM ET

SC Magazine > News > IT contractor indicted over oil company computer intrusion

## IT contractor indicted over oil company computer intrusion

Dan Kaplan March 16, 2009

## Conficker returns, exploiting weak passwords on network systems

By Kevin McAfee Apr 26, 2012

Conficker, the inextinguishable worm that first appeared in 2008 and infected an estimated 7 million computers before being slowed by a global public/private effort, just will not go away, according to a new report by Microsoft.

In fact, the number of computers infected by Conficker rose in 2011, totaling

1.7 million worldwide by year's end, according to the most recent Microsoft

Security Intelligence Report

## Hackers Have Attacked Foreign Utilities, CIA Analyst Says

By Ellen Nakashima and Steven Mufson  
Washington Post Staff Writers and Washington Post Staff Writers  
Saturday, January 19, 2008

In a rare public warning to the power and utility industry, a CIA analyst this week said cyber attackers have hacked into the computer systems of utility companies outside the United States and made demands, in at least one case causing a power outage that affected multiple cities.

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# FBI Cyber Priorities



By Jason Ryan  
@JasonRyanABC



Jan 31, 2012 7:20pm

## FBI Director Says Cyberthreat Will Surpass Threat From Terrorists



289



7



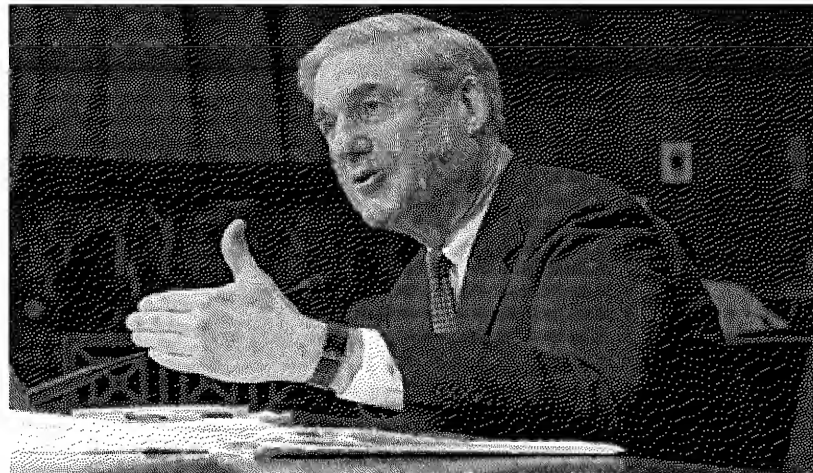
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Text



Threats from cyber-espionage, computer crime, and attacks on critical infrastructure will surpass terrorism as the number one threat facing the United States, FBI Director Robert Mueller testified today.



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# FBI Priorities

1. Protect the United States from terrorist attack.
2. Protect the United States against foreign intelligence operations and espionage.
3. **Protect the United States against cyber-based attacks and high-technology crimes.**
4. Combat public corruption at all levels.
5. Protect civil rights.
6. Combat transnational and national criminal organizations and enterprises.
7. Combat major white-collar crime.
8. Combat significant violent crime.
9. Support federal, state, county, municipal, and international partners.
10. Upgrade technology to successfully perform the FBI's mission.

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# The Costs and Statistics

- Average time to resolve a cyber attack – 24 days
- Average cost to organizations of \$591,780 over this 24 day period.
- 102 attacks per week on average
- Malware incidents – Significantly Affected 67.1% of organizations (trending upward)
- Botnet infections – 28.9% (trending upward)
- Theft of laptops – 33.5% (slight downward trend)

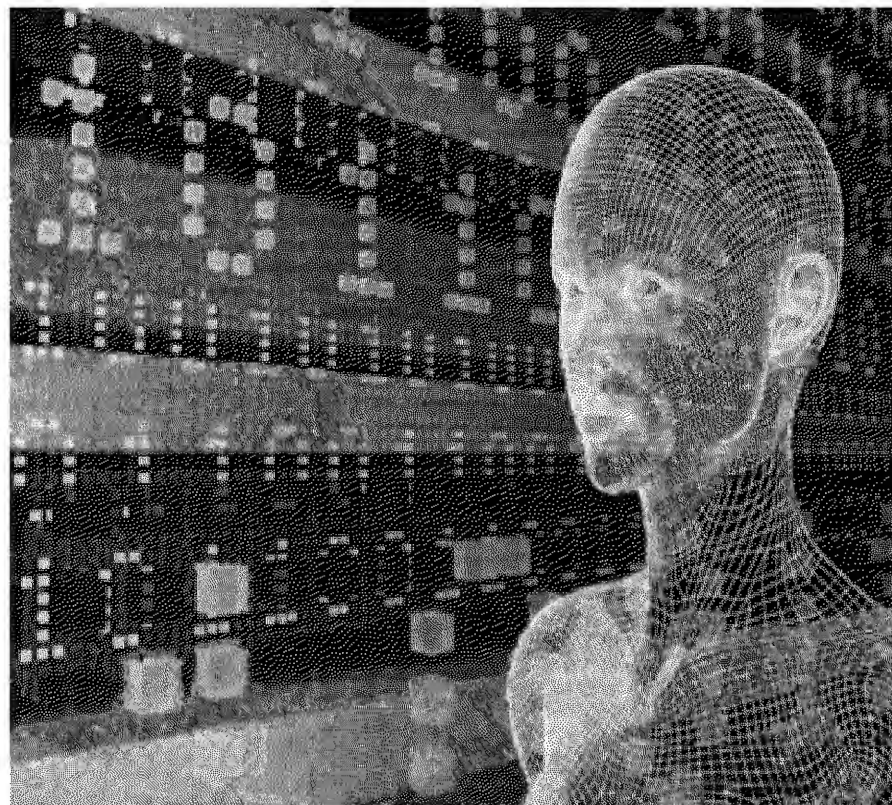
CSI 15<sup>th</sup> Annual 2010/2011 Computer Crime & Security Survey  
Ponemon Institute (Third Annual) 2012 Cost of Cyber Crime Study: *United States*



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# Cyber Threat Investigation

***Cyber Threat Investigation (n):*** “Any action taken within the United States, consistent with applicable law and Presidential guidance, to determine the identity, location, intent, motivation, capabilities, alliances, funding, or other methodologies of one or more cyber threat groups or individuals.”



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# CTI and Net Defender Missions

## Cyber Threat Investigation

- Understand & neutralize threat infrastructure
- Identify Victims
- Attribute threat actors & organizations
- Pursue actors & organizations

## Computer Network Defense

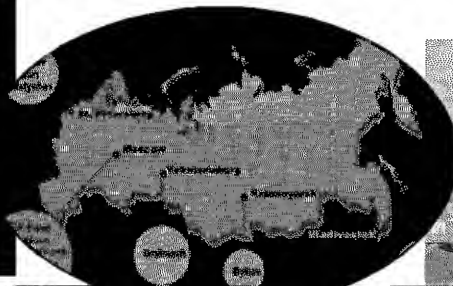
- Prepare for attacks & reduce vulnerabilities
- Detect & analyze computer intrusions
- Learn from vulnerabilities exploited
- Manage and contain losses

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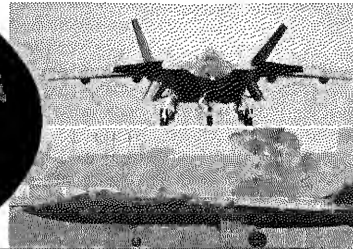
# U.S. Cyber Threats



Hacktivist



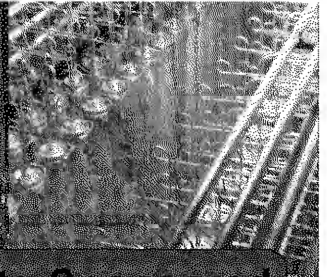
Criminal



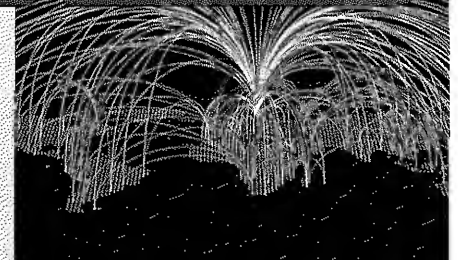
Espionage



Terrorism



State-Sponsored  
Disruptions/War



Exclusive Title 18 Authority

Availability of Title 18 Authority

Title 50 Authority

Title 10 Military  
Authority

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# Hacktivist

**Although the term “hacktivist” refers to cyber attacks conducted in the name of political activism, this segment of the cyber threat spectrum covers everything from individual hackers seeking thrills and bragging rights to hacker groups such as Anonymous and Lulz Security (LulzSec) conducting distributed denial of service (DDoS) attacks and website defacements against government. corporate entities.**



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# Criminal



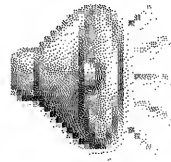
**Organized criminal groups have easily adapted to today's technology in exploiting the cyber arena. These groups continually attack systems for monetary gain through identify theft, online fraud, computer extortion, phishing, and spyware/malware.**

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# Criminal Acts

Laptop Theft  
Credit Card Theft  
Telecom Fraud  
Financial Fraud  
Web Site Defacement  
Denial of Service  
Unauthorized Access  
Viruses  
Insider Abuse



System Penetration  
Sabotage  
Mobile Device Hacking  
Abuse of Wireless Networks  
Bots  
Phishing Scams  
Social Engineering  
\* Exploiting Social Networks  
E-commerce



Cyber-thieves increasingly aiming at cellphones



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Posted: 05/14/2012

CLAUDIA BUCK Sacramento Bee

**Cyber criminals are mass producing techniques, says Verizon**

Targeting small-to-medium businesses

By Lee Bell

Thu May 10 2012, 17:00

**CYBER CRIMINALS** are mass producing their attack techniques and targeting smaller businesses, telecom Verizon has warned.

MAY 10, 2012

**APT attackers are increasingly using booby-trapped RTF documents**

Security experts say Microsoft Office RTF parsing vulnerabilities are a common target for attackers who distribute advanced persistent threats

By Lucian Constantin . IDG News Service

**Cyber-criminals catch on to online hotel booking craze**

14.05.2012

Categories: Consumer Tech, Internet, Software

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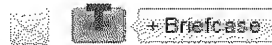
# Intentional or not, the end result is damage to your organization

- Disgruntled employees
- Excessive Access
- Inadvertent actions

## Insiders pose 'accidental' threat to business data, Symantec says

Blurring lines between home and office lead to data leakage

» Add a comment



By John P. Mello Jr.

February 08, 2013 — CSO — Valuable intellectual property is leaving companies every day and languishing at insecure locations where it can be scooped up by unauthorized parties.

PCWorld » Tech Industry

Recommend: 0 0 0 0 Comments Print

### Contractor Pleads Guilty to SCADA Tampering

By Robert McMillan, IDC News Sep 23, 2009 6:40 pm

A former IT consultant for an oil and gas exploration company has pleaded guilty to tampering with the company's computer systems after he was turned down for a permanent position with the company.

Nouri Azar, 28, pleaded guilty on Sept. 14 to one count of damaging computer systems and faces a maximum of 10 years in prison. News of his plea was announced Wednesday by the U.S. Federal Bureau of Investigation.

According to court records, Azar accessed Supervisory Control and Data Acquisition (SCADA) computer systems belonging to Pacific Energy Resources of Long Beach, California, and caused the company to lose control of its computer systems around May or June of 2008.

Only a handful of SCADA computer intrusions have been reported, but because the systems are used to control large-scale industrial systems in manufacturing plants, public utilities and the chemical industry, security experts worry that tampering with them could lead to a large-scale power outage or environmental disaster.

Azar played a role in setting up a system that helped the company communicate between its headquarters and oil platforms, and which was also used to deliver news on the company's oil platform. He had several user accounts on company systems, authorities said.

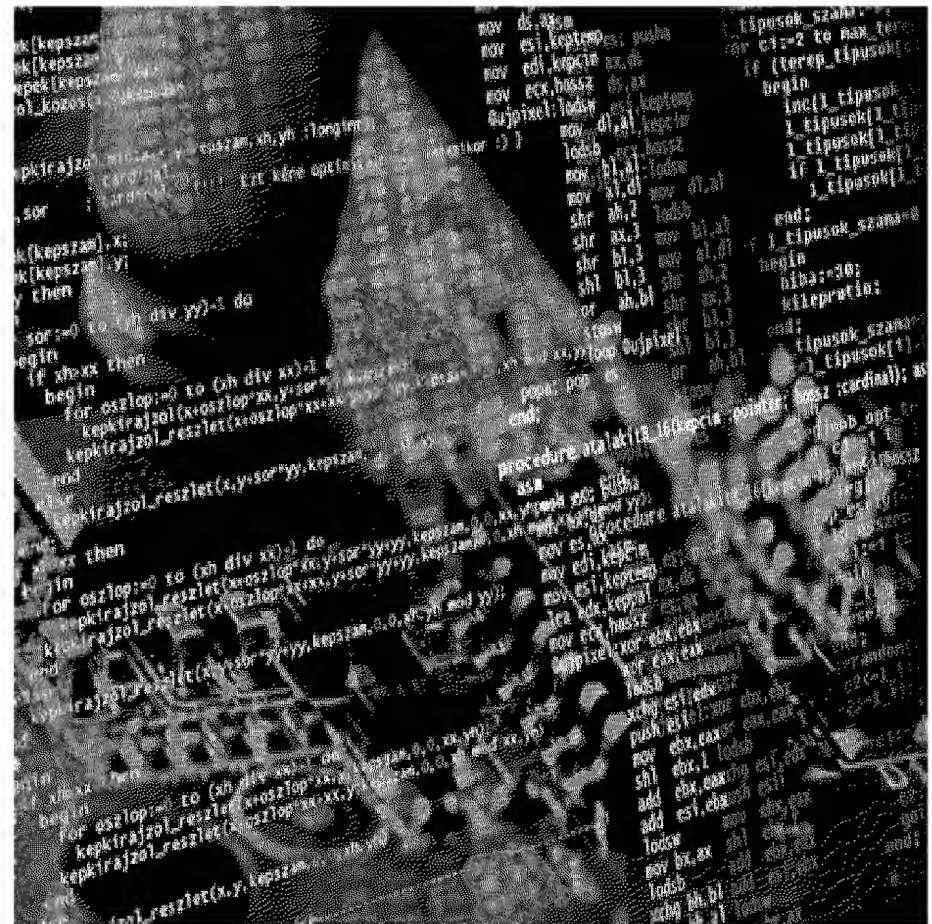
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# Industrial Espionage

**Every year, billions of dollars are lost to foreign and domestic competitors who deliberately target economic intelligence in U.S. industries and technologies. Through cyber intrusions, these intruders search for intellectual property, prototypes, and company trade secrets to gain an illegitimate advantage in the market.**



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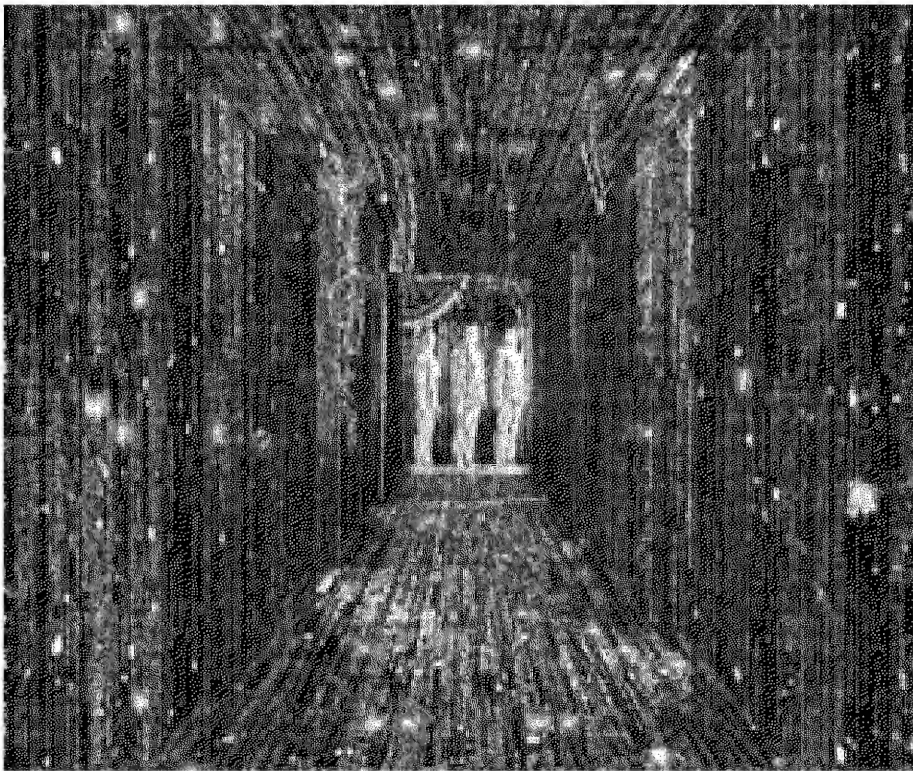
# **Reasons Why They'd Want to:**

Steal Customer Lists  
Steal R&D  
Cause Bad PR  
Disrupt Business  
Sabotage

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# State Espionage



**Foreign adversaries use cyber tools as part of traditional intelligence-gathering and espionage activities. These adversaries conduct computer network operations that target military and governmental organizations' intellectual property and insider information.**

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# Foreign Powers

08/08/2011

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Mossad's Miracle Weapon

Stuxnet Virus Opens New Era of Cyber War

By Holger Stark



The Mossad, Israel's foreign intelligence agency, attacked the Iranian nuclear program with a highly sophisticated computer virus called Stuxnet. The first digital weapon of geopolitical importance, it could change the way wars are fought -- and it will not be the last attack of its kind.

## Chinese hackers targeted energy multinationals, claims McAfee

Computer security firm alleges attackers made co-ordinated intrusions into systems of five major oil and gas firms

Tania Branigan in Beijing  
guardian.co.uk, Friday 11 February 2011 06:01 EST  
[Article history](#)



TECHNOLOGY | APRIL 8, 2008

## Electricity Grid in U.S. Penetrated By Spies

## Chinese Hackers Target U.S. Newspapers

Sarah Friesen | February 6, 2013 at 1:00 pm | (3)

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### APT1

Exposing One of China's Cyber Espionage Units

Special report: In cyberspy vs. cyberspy, China has the edge



By Brian Green and Mark Rosenblatt  
ATLANTA (The AP) 10, 2011 3:52pm EST

(Reuters) - As America and China grow more economically and financially intertwined, the two nations have also stepped up spying on each other. Today, most of that is done electronically, with computers rather than listening devices in chandeliers or human moles in tuxedos.

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are NSA, Gold VM  
Nov. 13, 2011  
Trade data show  
Nov. 13, 2011

Nov 3, 2011 1:22pm



By Jason Ryan  
[@JasonRyanABC](#)

## US Official Singles Out China, Russia on Cyber-Spying

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# Mandiant Report

(Released February 2013)

- Various cyber actors have engaged in malicious activity against Government and Private Sector entities
- The objective of this activity has been the theft of intellectual property, trade secrets, and other sensitive business information.
- The malicious actors have employed a variety of techniques in order to infiltrate targeted organizations, establish a foothold; move laterally through the targets' networks; and, exfiltrate confidential or proprietary data.

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# Industries Compromised - Mandiant

- Information Technology
- Aerospace
- Public Administration
- Satellites and Telecommunications
- Scientific Research and Consulting
- Energy
- Transportation
- Construction and Manufacturing
- Engineering Services
- High-tech Electronics
- International Organizations
- Legal Services
- Media, Advertising and Entertainment
- Navigation
- Chemicals
- Financial Services
- Food and Agriculture
- Healthcare
- Metals and Mining
- Education

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***targets at the direction, on behalf, or in support of a terrorist group or their ideology, through the use of computer network attack or exploitation. Such intrusions/attacks are intended to intimidate or coerce a government or population in furtherance of a social, political, ideological, or religious agenda by causing disruption, inducing fear, or undermining confidence.***

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# Terrorists on the Internet

## Israel cyber warfare: Hamas opens cyber front on Israel

Published on Tuesday 17 January 2012 02:48

Accustomed to fighting neighbouring nations and quelling Palestinian uprisings, Israelis are now faced with another form of attack: cyber-warfare that threatens to disturb daily life in the Jewish state.

Hackers yesterday disrupted the websites of the Tel Aviv stock exchange and national air carrier El Al, the latest victims of a campaign launched early this month by a hacker claiming to be from Saudi Arabia.

### TOP STORIES

1,000 stranded after Costa cruise ship fire  
Labour's pains rumble on  
Saleh ready to leave Yemen for exile in Ethiopia  
Analysis: The Arab Spring may herald the end of the world, not a fresh start

## Cyber Jihad Fatwas to Hack and Use Malicious Acts

Published on Friday, 01 February 2013 11:04 From Right Side News

## Steganography: how al-Qaeda hid secret documents in a porn video

Digital steganography hides files in plain sight, concealed in image and media files.

by Sean Gallagher - May 2 2012, 7:02am CDT

CYBERWAR IT PRIVACY

Photo illustration by Aurich Lawson

When a suspected al-Qaeda member was arrested in Berlin in May of 2011, he was found with a memory card with a password-protected folder—and the files within it were hidden. But, as the German newspaper *Die Zeit* reports, computer forensics experts from the German Federal Criminal Police (BKA) claim to have eventually uncovered its contents—what appeared to be a pornographic video called "KickAss."

## Osama bin Laden raid yields trove of computer data

480 Comments

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One of the Global Islamic Media Front's most popular products was a videogame called *The Night of Bush Capturing*, the object of which is to hunt and kill the President of the United States.



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# What Can I Do?

- Implement strong passwords
- Limit the use of Privileged (Admin) Accounts
- Protect personal/business information
- Use caution with social networking sites
- **Use caution with email attachments and untrusted links**
- Apply Software Updates and Enable Future Automatic Updates

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# Where Can I Learn More?

- [www.fbi.gov](http://www.fbi.gov)



- [www.us-cert.gov](http://www.us-cert.gov)



US-CERT

UNITED STATES COMPUTER EMERGENCY READINESS TEAM

- [www.nsa.gov/ia/\\_files/factsheets/Best\\_Practices\\_Datasheets.pdf](http://www.nsa.gov/ia/_files/factsheets/Best_Practices_Datasheets.pdf)



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Resources at: [www.fbi.gov](http://www.fbi.gov)



# Thank you for your attention!

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FBI-Minneapolis Division  
Minnesota Cyber Crime Task Force  
(763) 569-8000

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